

# EXHIBIT I

**IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF VIRGINIA  
Norfolk Division**

**DOUGLAS I. HORNSBY, Administrator  
of the Estate of CYNTHIA GARY,**

**Plaintiff,**

**v.**

**CASE NO. 2:22cv427**

**UNITED STATES OF AMERICA,**

**Defendant and Third-Party Plaintiff,**

**v.**

**METRO MACHINE CORP., d/b/a  
GENERAL DYNAMICS NASSCO - Norfolk,**

**and**

**ADVANCED INTEGRATED TECHNOLOGIES, LLC,**

**Third Party Defendants.**

**PLAINTIFF'S DESIGNATION OF EXPERT WITNESSES**

COMES NOW the Plaintiff, by counsel, and identifies the following expert witnesses in connection with this matter:

**Chester D. Rudolf, III, P.E.  
2328 Haversham Close  
Virginia Beach, VA 23454**

**Retained Expert  
Liability/Negligence/Causation**

**Jerome S. Paige, Ph.D.  
TD&P Consulting, Inc.  
8403 Colesville Road  
Silver Spring, MD 20910**

**Retained Expert  
Damages**

Dr. Nicole Masian  
Assistant Chief Medical Examiner  
830 Southampton Avenue, Suite 100  
Norfolk, VA

Treating Physician  
Causation

Plaintiff reserves the right to call any other witnesses listed by the Defendants in their Rule 26(a)(1) disclosures and/or identified in the documents produced in this case, who will testify consistent with the records should the need arise.

**DOUGLAS I. HORNSBY, Administrator  
of the Estate of CYNTHIA GARY**

By   
Of Counsel

Robert J. Haddad, Esq. (VSB No. 22298)  
Andrew M. Hendrick, Esq. (VSB #42852)  
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**CERTIFICATE OF SERVICE**

I hereby certify that a true copy of the foregoing was transmitted electronically and mailed, first-class, postage prepaid, this 4th day of November, 2024 to the following:

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**Amended Expert Report for Andrew M. Hendrick, Esq.**

**RULOFF, SWAIN, HADDAD,**

**MORECOCK, TALBERT & WOODWARD, P.C.**

Date: January 8, 2025

RE: ***DOUGLAS I. Hornsby, Administrator of the Estate of CYNTHIA GARY v. United States of America et. al***

**I. Introduction and Personal Background**

I have been retained as an expert witness in the subject case. As a matter of background, I have three educational degrees, a Bachelor of Science in Mechanical Engineering from the University of Wisconsin, a Master of Science in Mechanical Engineering and a Masters in Financial Management from the U.S. Naval Postgraduate School. For 50 years I have been a Professional Engineer registered in the State of California. My career spans 59 years, 20 of which were as an engineer officer in the U.S. Navy, which included Main Propulsion Assistant on the destroyer USS Mullany (DD 528), Chief Engineer of the Missile Destroyer USS Conyngham (DD 17), and Chief Engineer of the aircraft carrier USS Independence (CV 62). In my shipboard tours I was instrumental in training and execution of tagout procedures for mechanical, electrical and pneumatic systems. My shore duty tours included that of material inspector of destroyer engineering plants for the Commander Naval Surface Forces Atlantic Fleet. In addition to my extensive education and on-the-job

training I attended the Senior Officers Material Course, Nuclear Training Site, Idaho Falls, Idaho

Following my Navy career, I was employed by the Port of Virginia for 20 years, 17 of which were as the Director of Engineering and Maintenance for Virginia International Terminals (VIT), the operating company for the Port of Virginia. I have considerable experience with the maintenance, inspection operation, procurement, commissioning, repair, and testing of ship-to-shore container cranes, their controls, and component parts. I have an understanding of electrical distribution systems, pneumatics, and control systems.

Following retirement from VIT, I have been an independent consultant in the Marine Industry and have represented several ports as well as various manufacturers. My consulting career includes acting as an expert witness in multiple cases involving various engineering and control equipment and systems. My duties as an expert witness have also included testifying in litigation, however, I have not testified within the last 4 years.

My fee for services rendered in the above-referenced case is \$325 per hour.

A copy of my curriculum vitae is attached hereto as Exhibit 1.

## **II. Information Reviewed**

For purposes of my analysis, I have examined and reviewed numerous discovery documents provided to me by Mr. Andrew Hendrick, Esq. of the firm of Ruloff, Swain, Haddad, Morecock, Talbert & Woodward, P.C. Any available documents that I requested in this case were provided to me. The following were of particular interest to me in the course of my analysis:

1. Complaint in the case of the Estate of Cynthia Gary v United States et. Al.
2. Case document production US000001-000001600
3. Tech Manual for Moisture Separator/Blow-Panel Set S9234-GA-GTP-20, Revision 4 and 5;
4. Depositions of LCDR Getty, GSMCS Goff, GSMC Preetam, and Tim Bowman, plus exhibits.
5. COMNAVSURFLANT Class Advisory message Situational Awareness and Guidance on Blow-In Door Controller Panel dated 19 April 2021.
6. Commanding Officer, Naval Surface Warfare Center, Philadelphia Division Letter of March 7, 2024, with Enclosure, Review of Detente Action Rotary

Switch on DDG-51 Class Blow-in Door Controller Panel D510-S0009-1 (NSN 5930-01-336-9963), including the references

7. U. S. naval Criminal Investigative Service Report of October 7<sup>th</sup>, 2021
8. U. S. naval Criminal Investigative Service Report of September 16<sup>th</sup>, 2021
9. U.S. Department of Labor, Occupational Safety and Health Administration (OSHA) Violation Worksheet of September 30<sup>th</sup>, 2021, and walkaround notes of various dates immediately following the accident.
10. Tag-Out User's Manual, NAVSEA 0400-AD-URM-010 Revision 8 dated 28 Oct 2020
11. General Gas Turbine Bulletin (GGTB) #28 Revision 2 dated April 30, 2018, promulgated by Naval Surface Warfare center Philadelphia Division, Subject: Blow-In Door Gasket Replacement DDG 51 Class
12. Naval Surface Warfare Center Philadelphia Division DDG 51 Advisory for Situational Awareness and Guidance on Operation of Blow-in Door Controller Panel dated 3/7/2024
13. Videos from inspection of USS McFaul

### **III. Background**

- Gas turbines which power vessels of the McFaul class vessels their associated gas turbine generators (known as SSTG's) require clean dry air for operation and are hence equipped with moisture separator/Blow-in panels which remove moisture and salt from the outside air prior to combustion. Some of the panels are mounted on doors, which, when opened, allow the flow of air for turbine combustion to be maintained should the separator become clogged and air flow reduced.



Figure 1. Blow-in Door Panel from Outside

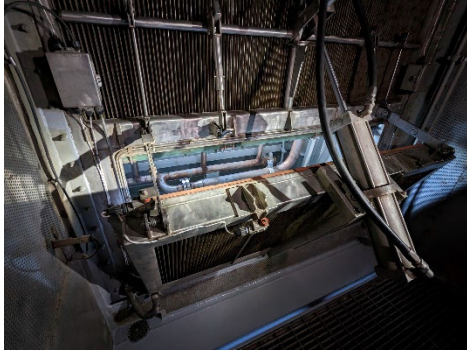


Figure 2. Blow-in Door from Inside



Figure 1 is a photo of the outside of the Blow-in panel or BID also known as the “dirty” side of the combustion air intake. Figure 2 is a photo of the inside of the BID also known as the “clean” side. The door/panel opens only about 35 degrees. The BID opening has been used, as in this case, as a convenient access for welding and miscellaneous supply for work in the uptake passages.

- The moisture separator door opening is an automatic system and in normal operation the door(s) is closed. When reduced air flow to the SSGTG is sensed the door opens automatically and stays open until normal air flow can be restored. There may be times when the automatic door function needs to be overridden. This can be done at the door control station located in the appropriate engine room. Figure 3 is a photo of the control station for #2 SSTG in the Engine Room #2.



Figure 3. Blow-In Control Panel for #2 SSGTG

By placing the lower left rotary switch, shown in Figure 3, in the AUTO position the operator permits the BID to open automatically whenever differential pressure exceeds allowable limits. This is the normal operating position. *(For safety purposes, to keep the switch from being inadvertently turned, the switch was designed to only be turned by first pressing it inward slightly before actuation.)* By placing the switch in the OPEN position, the automatic function is bypassed, and the door is held open regardless of the differential pressure until the switch is turned to CLOSE. I have shown in Figure 4 a rough schematic of the system functioning.

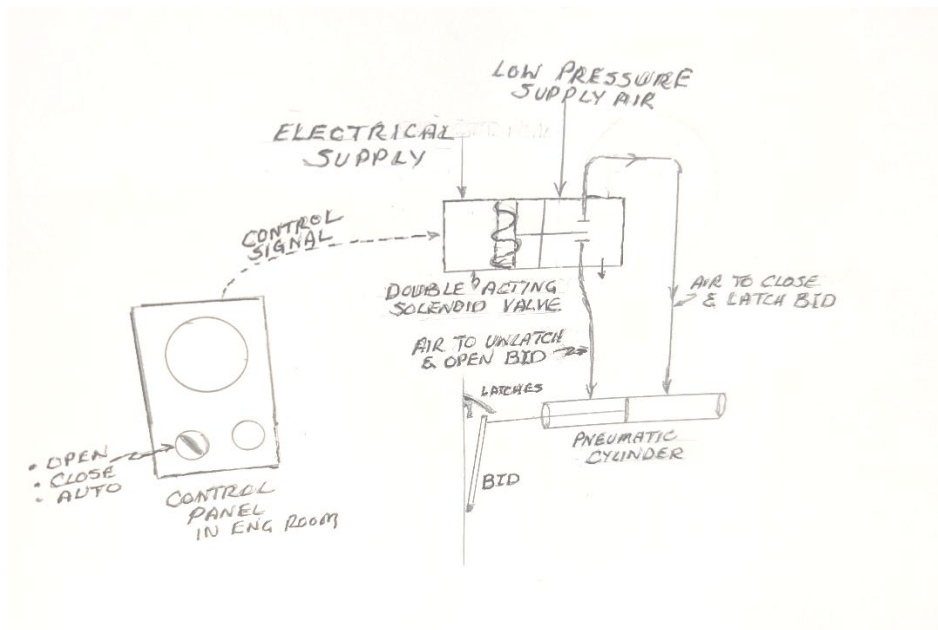


Figure 4. BID Control System Schematic

The control switch provides a signal to a solenoid actuating valve which allows air pressure to open and close the door through a pneumatic cylinder which can be seen in the Figure 2 photo.

- At the time of the accident USS McFaul was undergoing a repair availability at NASSCO Norfolk. For this type of availability, the work items to be accomplished are determined well in advance with the assistance of the Type Commander. The repair activity is then contracted to do the actual work. During the availability the repair activity (RA) submits Work Authorization Forms (WAF) to the ship's force notifying them of the timing and nature of a specific job and recommends certain systems be tagged out to safely accomplish the work. The tagout is the responsibility of ship's force with review and approval of the repair activity.

**IV. Inspection.** In addition to my review of the documents and exhibits listed above, on February 9, 2023, I, along with attorneys Mr. Robert Haddad and Mr. Andrew Hendrick, conducted a site inspection of the USS McFaul (DDG-74). This inspection included #2 Engine room, #2 SSGTG, and the associated Blow-in door and control panel for #2 SSGTG. The BID was operated for us to witness the opening and closing from both the clean and dirty sides.

**V. Facts Evident From Review of the Documents in item II.**

- On the day of the accident USS McFaul (DDG 74) was undergoing a repair availability at NASSCO Norfolk.
- The accident occurred at the #2 SSGTG BID on March 15, 2021. Ms. Cynthia Gary was on duty for a subcontractor and was posted as a fire watch for hot work being performed by Coastal Mechanical Systems on the “clean” side of the uptakes for SSGTG #2. She had been stationed on the “dirty side to carry out her watch.
- According to his deposition, GSCS Goff went to the scene of the accident when he heard the notice over the announcing system. After working to free Ms. Gary and once the medical corpsman was on site, he went immediately to the #2 engine room to check the controller, Figure 3. He stated that the switch was set at the closed position and looked like it had been slightly bent. He noticed a danger tag in place on the switch selector.
- GSCS Goff also mentioned in his deposition that he was not aware that the push-to-turn function of the control station selector switch was not working properly until it was checked after the accident. He mentioned that the switch was able to turn without depressing it first.
- Following the accident Ship’s Force tested the BID for designed opening and closing operation March 17, 2012, and found it to be operating properly from the control station. However, during that test, the ships’ force personnel claimed that the door could not be opened or closed manually even though GSCS Goff said that he could easily close the door if air pressure to the solenoid valve was secured.
- An OSHA report noted that the push-to-turn function on the selector switch for open/close/auto operation was not functioning.
- A review of the NavSea Tagout manual. Document item II. 9, documents the following inter alia:
  - 1.3.1a The Commanding Officer is responsible for the safety of the entire command...
  - 1.3.1b The Authorizing Officer shall supervise the tagout log....
  - 1.3.1d Ship’s Force is responsible for ensuring the adequacy and accuracy of all tag-outs, including those proposed by the repair activity (RA)

- 1.3.3a (3) The RA is responsible for ensuring the accuracy and adequacy of tag-outs before signing the **Repair Activity Rep** block of the tag. This review shall ensure that enough tags are used to completely isolate the system, piping, or circuit being worked on to prevent operation of a system or component from all stations that could exercise control.
  - 1.6 ....as a minimum, system diagrams or circuit schematics shall be used by preparers and reviewers to determine the adequacy of all tag-out actions.
- There had been a tag (2020-009908) posted on the selection switch on the BID control station in the open position. This was noted in Getty Deposition Exhibit 2. The repair activity witness block on the tag was blank.
- Two previous WAF's, 0271 and 0273 had been submitted by the RA coordinator to the ship on January 29, 2021, which requested that the BID be tagged out in the open position. On March 11, 2021, the EM02 (Engine room #2) workstation audit indicated that the tag was still in place.
- In Preetam Deposition exhibit 5, OSHA noted that based on the WAF (to perform hot work in the SSGTG #2 uptakes) Coastal Mechanical Systems was aware of the blow-in door work and hazards. It further stated that a No Tagout Required (NTR) was indicated on the WAF to Coastal Marine Systems because the door was already tagged out for AIT Marine (gasket replacement).
- There was no record that there was any posting of warning or sign noting for anyone near the dirty side of the BID that there was a hazard associated with the BID opening or closing.
- The Chief Engineer stated in his deposition that the closing of the BID at the time of the accident could not have been accomplished at the BID location but must have been done in the engine room.
- In her deposition GSNC Preetam stated:
  - She had worked on BID's primarily using the Planned Maintenance System (PMS) on both the USS McFaul and the USS Mason, ships of the same class.
  - She was the authorizing officer for some, but not all, of the tagouts associated with these checks.
  - Although the OSHA report mentioned that the BID's were her responsibility. she stated that the tag-out requested prior to the accident was not typical of

tag-outs she authorized. She claimed that for most of the BID maintenance the control switch was tagged out “closed”.

- She recalled that this may have been the first time she was asked to tagout the doors in the “open” position so she decided it would be best to leave air pressure on the system to have the pneumatics hold the door open while work for the contractors was being conducted. This is despite the fact she was the authorizing officer for both WAF 271 and 273 which the RA requested doors be tagged out in the open position.
- She claimed that the PMS card prescribed the steps to be taken to tag the door in the open position.
- She claimed that disconnecting the LP air from the system would have resulted in the door closing.

## **VI. Analysis**

- It wasn’t necessary for the for the system to be energized to keep the BID held in the open position as specified by Ms. Preetam. Furthermore, disconnecting the LP air with the controller set to “open” would not result in the BID actually closing. The safe process to prevent inadvertent closing of the BID should have been:
  - With the system energized set the selector switch on the control panel to “open”.
  - Then remove LP air and tag-out the LP air supply valve closed. The door should still be open.
  - The BID control switch should then be tagged out open.
- For the BID to have powered to the closed position there had to have been electrical power and air pressure to the solenoid actuator plus a control signal from the controller to the solenoid. See Figure 4.
- There was no mention in the depositions that system diagrams or circuit schematics were required by the RA and Ship’s force to determine the adequacy of tag-out actions as specified by the Tag-out manual. The only person in either Ship’s Force or the RA that seemed to know what would happen if air or electric power to the solenoid actuator was removed was GSCS Goff yet he stated he was not involved in

the tagout process for any of the WAFs requiring the door to be tagged out in the open position.

- Several Documents require that all energy sources (which include low pressure air and/or electrical power) be isolated/deenergized when tagging out a system such as a blow-in door.
  - COMNAVSURFLANT Class Advisory 19 April 2021 item 11, #5 above
  - NavSea Tagout Manual item II #10 above.
  - Maintenance Requirement Cards (MRC's) in Maintenance Index page 2513 which Ms. Preetam alleged to refer to in the tag-out
  - General Gas Turbine Bulletin (GGTB) #28 Revision 2 dated April 30, 2018, Item II, #11 above
  - Naval Surface Warfare Center Philadelphia Division DDG 51 dated 03/07/2024, Item II, #12 above
- Mr. Bowman in his deposition mentioned that any of the advisories by Naval Surface Warfare Center did not change the intention of any NavSea directives requiring removal of electrical or air supply to the BID system as part of the tagout for work on the BID system.

## **VII. Conclusions**

- The OSHA report cited that the selector switch on the control panel was broken. Naval Surface Warfare Philadelphia Division mentions in its advisory, item II #11 above, that many push to turn switches in the Fleet had been broken or disabled but that the loss of this feature does not result in a switch malfunction or BID inoperability. The loss of this function removes one safety feature preventing inadvertent change of door position and in combination with the other issues set out below, this loss of function made this accident more likely to occur.
- Based on my discussion above, I believe the direct cause of the accident was:
  - Failure of McFaul Ship's Force to properly set up and tag-out the BID system. Contrary to all the advisories and documents I have listed in the analysis, GSM1 Preetam specifically called for supply air to remain on the system despite the potential for personnel and maintenance equipment maintaining or transiting the BID. Even though GSCS Goff understood the

basics of the system he had not inserted himself in an awareness or review of the tag-outs regarding one of the basic systems he was overall responsible for in his job.

- Failure of the RA to properly review the tag-out procedure and system schematics with the Authorizing Officer before posting of the tags associated with the BID's. The WAF's submitted should also have been more specific in the specifics for tagout. System schematics should have also been reviewed with the Ship's Force Authorizing Officer prior to tagging.
- There is no evidence of the RA properly warning the fire watch of the pinch hazards associated with open BID's.
- The Chief Engineer was not knowledgeable or experienced enough to recognize the circumvention of good engineering practices that took place with respect to control and tag-out of BID's that would have allowed him to see red flags associated with tagouts of potentially hazardous systems.
- NavSea should have been more proactive in installing alterations to ships to eliminate the use of BID for any use other than that originally intended as specified in the Technical Manual.

In summary, (1) ship's force should have tagged out the LP air; and (2) ship's force should have known to tag out the LP air for the reasons in the NSWC report dated March 7, 2024.

A handwritten signature in black ink, appearing to read 'C. D. Rudolf III', with a stylized, cursive script.

C. D. Rudolf III